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COUNTRY USSR

CIA

SUBJECT Use of Isotopes in Chemistry Research/B.A. Arbuzov/ DATE 14 JULY 53

Published Research Relating to Use of Organo-Phosphorus Compounds

PLACE ACQUIRED for Insecticides
(BY SOURCE) 25X1A

Supplement to:

DATE ACQUIRED
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Responsive to:

DATE (OF INFO) upto July 53

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1. I have noticed of late [for a year or so up to July 1953] frequent reference in Soviet chemical literature and abstracts to the use of isotopes in fundamental organic and physical chemical research. I recall specifically isotopes of deuterium, C¹⁴, and one of the isotopes of phosphorus. What has impressed me is the frequent use of isotopes by the Soviets of late, the apparent ready availability of a considerable variety of isotopes, and the technical knowledge and training which their use of isotopes indicates. It is significant that they have reached a stage where they can easily employ these techniques in a general way and at a level of competence roughly comparable to US achievements. Obviously, a considerable number of Soviet chemists have been well trained in the use of isotopes in basic, theoretical research. In the field of petroleum, for example, I remember generally one paper involving isotopes, reflecting a level of research which US Shell Development Corporation would find quite satisfactory. One issue of the US Chemical Abstracts (I do not now recall exactly which one) impressed me particularly as being loaded with examples of the Soviet use of isotopes. Also, the use of a deuterium isotope implies heavy water and an electrolytic plant, C¹⁴ a pile or cyclotron, and phosphorus isotopes a cyclotron or some other machine. Therefore, they apparently have pretty good equipment for the production of isotopes.

2. I have also followed with interest the published papers of B.A. Arbuzov, the physical chemist and son of the famous A.E. Arbuzov - both located at the Institute of Chemistry Imeni A.E. Arbuzov at the University of Kazan, Kazan,

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